

Program Description/Textbook or Print Instructional Material

Vendor:	Glencoe/McGraw-Hill	Web Address:	http://www.glencoe.com
Title:	FOOD SCIENCE: THE BIOCHEMISTRY OF FOOD AND NUTRITION		
Author:	Mehas, Rodgers	Copyright:	2002
ISBN:	0078226031	Course/Content Area:	FOOD SCIENCE
Intended Grade or Level:	9-12	Readability Level:	9 Fry
List Price:	N/A	Lowest Wholesale Price:	38.49

Level of Accommodations (Level One, Two or Three) Level Three

If Level Two or Three, please provide rationale for not meeting Level One Compliance: Providing a higher level of accessibility compliance is too costly for the size of the student enrollment in this curriculum area.

FEATURES*

***DISCLAIMER:** The features of each book or program were developed by the publisher and do not reflect the opinion of the State Textbook/Instructional Materials Review Team, State Textbook Commission, or the Kentucky Department of Education.

Content

Food Science: The Biochemistry of Food and Nutrition presents content basic to a food science course: using the scientific method, laboratory equipment, the basics of chemical and physical changes in food, nutrition including digestion and metabolism, acids, carbohydrates, the chemistry of food, and the microbiology of food processing. The program is designed to meet the needs of students studying nutrition, the chemistry of food in metabolism in a Family & Consumer Sciences course, OR to students applying the scientific method to find the effect of acids on protein, the impact of enzymes on food, or testing for food additives in a science course. With its easy-to-read format, clear visuals and hands-on experiments, *Food Science: The Biochemistry of Food and Nutrition* motivates students to learn the science behind food.

Student Experiences

Food Science: The Biochemistry of Food and Nutrition is designed to help students develop an understanding of the science behind nutrition. Clear objectives for each chapter, clearly identifiable topic heads and sub-heads, visually interesting illustrations and hands-on labs using the scientific method all involve and motivate students to understand the concepts and terminology of food science. Students will be actively engaged in discussion of genetically altered plants, the impact feeding the world's population, and why irradiation of meat causes controversy.

Assessment

Food Science: the Biochemistry of Food and Nutrition includes a variety of assessment instruments to support learning. The hands-on experiments offer opportunity for students to verify reading content, end-of-chapter activities measure understanding of concepts through the critical thinking questions, thinking labs, and skill-building problem solving. End-of-Chapter tests in the teacher Resource Guide and **ExamView®** computer test generator provide formal assessment for every chapter.

Organization

Food Science: The Biochemistry of Food and Nutrition has 6 Units divided into 28 Chapters. Each Unit begins with TechWatch and TechWatch Activity where students learn about the technological advancements related to food. Each Chapter has clearly defined objectives and Terms to remember. Special features: Nutrition Link, Real-World Impact, and Food Science careers add interest and extend content. End-of-Chapter Using Your Knowledge questions directly relate to the stated Chapter Objectives. One experiment per chapter (28) plus 28 more experiments in the Lab Manual provide much hands-on activity for students.

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Resource Materials

- **Gratis Items To Be Provided And Under What Conditions**

Free, 1 Per Teacher: Teacher's Resource Guide, Effective Instruction CD-ROM, Lab Manual TAE

- **Available Ancillary Materials**

All Items Listed Above as Gratis Items

RESEARCH DATA/EVIDENCE OF EFFECTIVENESS**

****DISCLAIMER:** The Research Data/Evidence of Effectiveness was provided by the publisher and do not reflect the opinion of the State Textbook/Instructional Materials Review Team, State Textbook Commission, or the Kentucky Department of Education.

Research Data

The fourth edition of this text was prepared after detailed review of the prior edition and collaboration by the two authors. State curriculums on food science classes helped guide text development. Extensive fact checking and research verified technical information. The authors of this text are experienced professionals, one a science teacher, and the other a Family & Consumer Sciences teacher. Feedback from teachers, including information received from attendees at the annual convention of the American Association of Family & Consumer Sciences (AAFCS), has contributed to the development of this text.



Group V - Career/Technical Vocational/Practical Living Education Instructional Materials Evaluation Tool Family & Consumer Sciences



Title: Food Science: The Biochemistry of Food and Nutrition Student Text: \$38.49			
Publisher: Glencoe/McGraw-Hill			
Item Evaluated: Student text—Lab manual—teacher's resource guide			
Copyright Date: 2002		Evaluator: Connie Duvall	
Content Level: Grade level 9-12		Date of Evaluation 7-28-03	
Level of Alternative Format	Level 1 – Full Compliance	Level 2 – Provisional Compliance	Level 3 – Marginal Compliance
This section completed by Exceptional Children Services			

Overall Strengths and/or Weaknesses

Disclaimer: Comments on the strengths and/or weaknesses of each book, material or program were written by members of the State Textbook/Instructional Materials Review Team and reflect their opinions . They do not reflect the opinions of the State Textbook Commission nor the Kentucky Department of Education. In addition, the State Textbook/ Instructional Materials Review Team completed each evaluation form during the week of July 28-Aug. 1, 2003. In order to maintain the integrity of the of the review team's comments, editing was limited to spelling and punctuation.

Recommendations:
<input checked="" type="checkbox"/> Recommended by reviewers to State Textbook Commission
<input type="checkbox"/> Not recommended by reviewers to State Textbook Commission

Publisher's Explanation of Reviewer's Comments: By action of the State Textbook Commission, publishers are provided limited space, 150 words, to respond to what they may consider factual errors made by the reviewers in the evaluation.



Group V - Career/Technical Vocational/Practical Living Education Instructional Materials Evaluation Tool Family & Consumer Science



Title: Food Science: the Biochemistry of Food & Nutrition		Publisher Glencoe/McGraw-Hill	
Technology Management Summary Data:	20 possible points	_____0____ points earned	
Technology Management Comments: No student technology available to preview— a video of experiments is available.			
Technology Presentation/Interface Summary Data:	40 possible points	_____0____ points earned	
Technology Presentation/Interface Comments: No student technology available to preview—a video of experiments is available.			
Content Summary Data:	44 possible points	_____8____ points earned	
Content Comments:			
Instruction & Management Summary Data	52 possible points	_____48____ points earned	
Instruction & Management Comments:			
Organization & Structure Summary Data	36 possible points	_____34____ points earned	
Organization & Structure Comments:			
Resource Material Summary Data	40 possible points	_____40____ points earned	
Resource Material Comments:			



Group V - Career /Technical & Vocational/Practical Living

Electronic Instructional Media Review Form

Stand Alone/Independent or Integrated Software for Family & Consumer Science



Equipment (circle or change fill color)	Grade Level (circle or change fill color)	Audience (circle or change fill color)	Format (circle or change fill color)	Cost _____	
Windows	Primary	Individual	Stand Alone/Independent	_____ single copy	_____ site license
Macintosh	Intermediate	Small Group	Integrated	_____ network version	_____ school version
CD-ROM	Middle	Large Group	Supplemental	_____ lab pack of _____ copies	_____ online
DVD	High		In lieu of basal test		
Sound					
Other					

If other, explain _____

Type of Software: Check all that apply	_____ Simulation	_____ Management	_____ Interdisciplinary	_____ Problem Solving	_____ Tutorial
_____ Exploratory	_____ Creativity	_____ Drill and Practice	_____ Critical Thinking	_____ Utility	_____ Other:

Rating Scale:	3—Some of the time	1—None of the time
4—All or the time	2—Minimally	0— Not applicable

Management	Rating
Allows customizing for individual learning needs.	
Allows students to exit and resume at a later time.	
Keeps a students performance record, where needed.	
Allows control of various aspects of the software (e.g., turning sound off).	
Allows for printed reports.	
Comments:	Total

Presentation/Interface	Rating
Presents material in an organized manner.	
Has consistent, easy-to-use, on-screen instructions.	
Has developmentally correct presentation format.	
Adapts to different learning environments (learning styles/multiple intelligences, etc.)	
Accessible for special needs students.	
Runs smoothly, without long delays.	
Presents easy-to-view text and graphics.	
Presents easy-to-hear and understand sounds.	
Avoids unnecessary screens, sounds, and graphics.	
Provides immediate, appropriate feedback.	
Comments:	Total

Content—Family & Consumer Science	Rating
Family	0
Childcare/Parenting	0
Child/Adolescent/Human Development	0
Interpersonal Relationships	0
Goal Setting/Decision Making	0
Consumerism	0
Foods/Nutrition	4
Apparel/Textiles	0
Housing Interiors	0
Food Science Careers	4
FCCLA: Family, Careers, Community Leaders of America	0
Comments:	Total 8

Rating Scale:	2—Minimally
4—All or the time	1—None of the time
3—Some of the time	0— Not applicable

Instruction and Assessment	Rating
Identifies a Sense of Purpose	4
Builds on Student Ideals	4
Engages Students	4
Develops Family & Consumer Science Ideas	4
Promotes Student Thinking	4
Assesses Student Progress	4
Enhances The Learning Environment	4
Reading level is appropriate for interest and ability level of intended student group; level remains consistent throughout.	4
Commonwealth Accountability Testing System (CATS) “like” Assessment is provided	3
Variety of Assessments (diagnostic, formative, summative, open response, multiple choice, individual, small group, oral, demonstrations, presentations, self and peer performance, portfolio prompts) is included.	4
Includes activities and opportunities for integration of technology.	2
Reflects researched-based practices (e.g. hands-on activities, technology, problem-solving situations)	3
Differentiation techniques and activities suggested.	4
Comments:	Total 48

Rating Scale:	3 – Some potential for learning	1 - Not present
4 – High potential for learning	2 – Little potential for learning	0 – Not applicable

Organization and Structure	Rating
Organization is logical and allows for spiraling of content.	4
Vocabulary and key terms are clearly defined and easily accessible within each lesson.	4
Visual illustrations (e.g. graphs, charts, models) and examples are clearly presented and content-related.	4
Illustrations and language reflect diversity (e.g. racial, ethnic, cultural, age, gender, disabilities).	4
Legible type, length of lines, spacing, and page layout and width of margins contribute to overall appearance and use.	4
Student materials seem durable and conducive to daily use.	4
Includes sufficient glossary, index and appendices.	4
Employs accurate grammar and spelling	4
Organization of material can be effectively used with Standards Based Units, Core Content and Program of Studies.	2
Comments:	Total 34

Resource Materials	Rating
Teacher materials coordinate easily with student materials (e.g. additional resources included at point of need, student pages shown, integration of technology indicated)	4
Activities are included that adapt to the various learning styles, intelligences, and interest/ability levels.	4
Extension activities including adaptations and accommodations for students with special needs.	4
Resources provide objectives, background information, common student errors, hints, advice for lesson implementation and real-world connections, connections with career and/technology and references (e.g. solution manuals, study guides)	4
Suggestions are made for integration of themes and /or interdisciplinary instruction.	4
Integration opportunities suggested and examples given.	4
Teacher resources are available online.	4
Online resources available – Repeat of information in text.	4
Online resources available – Practice skills only.	4
Online resources available – New application materials.	4
Comments:	Total 40

Rating Scale:	
4—All or the time	2—Minimally
3—Some of the time	1—None of the time
	0— Not applicable